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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,307	11/01/2001	Jerald K. Rasmussen	56710US002	2390

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EXAMINER
SIEW, JEFFREY

ART UNIT	PAPER NUMBER
1637	

DATE MAILED: 03/25/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/001,307	Applicant(s) RASMUSSEN ET AL.	
	Examin r Jeffrey Siew	Art Unit 1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-46* is/are pending in the application.

4a) Of the above claim(s) *45 and 46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in Paper No. 6 is acknowledged.

Claims 45 & 46 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 3.

Double Patenting

2. Claims 1-5,9-20,24-30 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,395,483 in view of Minehan et al (Macromolecules vol. 27 pp. 777-783 1994).

Claims 1-5,9-20,24-30 of the instant application are drawn to article of shrinkable polymeric substrate and electrically conductive coating.

Claims 1-3 of US 6,395,483 are drawn to an array with polymeric substrate with mask layer in which the polymeric substrate is relaed elastomeric substrate.

Claims 1-3 of US 6,395,483 are not drawn to electrically conductive coating.

Minehan et al teach polypyrrole PPy coating of films for DNA binding (see whole document esp. abstract).

One of ordinary skill in the art would have been motivated to apply Minehan et al electrical conductive polypyrrole to the array of US6,395,483 in order to provide a unique

surface for DNA binding. Minehan et al state that Ppy coating provides an excellent DNA binding for application in hybridizations assays (see page 777). It would have been prima facie obvious to apply Minehan et al's teaching Ppy to the array of US6,395,483 in order to increase the binding of DNA to film surfaces for hybridization assays.

3. Claims 6,7, 21 & 22 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,395,483 in view of Feast et al (Polymer vol. 37 (22) 5017 1996).

Claims 6 & 21 of the instant application are drawn to article of shrinkable polymeric substrate and electrically conductive coating with aniline. Claims 7 & 22 are further drawn to polyacetylene.

Claims 1-3 of US 6,395,483 are drawn to an array with polymeric substrate with mask layer in which the polymeric substrate is related elastomeric substrate.

Claims 1-3 of US 6,395,483 are not drawn to analine.

Feast et al teach aniline coating and polyacetylene (see whole doc.).

One of ordinary skill in the art would have been motivated to apply Feast et al's anline or polyacetylene to the array of US6,395,483 in order to provide a unique surface for DNA binding. Feast et al state that analine provides a low cost and highly conductive fcoating. It would have been prima facie obvious to apply Feast et al's conductive analine coating to the array of US6,395,483 in order to provide a stable and reactive surface for binding of DNA.

4. Claims 8 & 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,395,483 in view of Minehan et al (Macromolecules vol. 27 pp. 777-783 1994) in further view of Halverson et al (WO 99/53319 21 October 1999)

Claims 8 & 23 of the instant application are drawn to article of shrinkable polymeric substrate and electrically conductive coating with the added limitation of azlactone moieties.

The claims 1-3 of US 6,395,483 and teachings of Minhan were described previously.

Claims 1-3 of US 6,395,483 are not drawn to azalactone. .

Halverson et al teach azlactone binding linkers (see page 12 line 26).

One of ordinary skill in the art would have been motivated to apply Halverson et al's azloactone linking agent to the array of US6,395,483 in order to provide a hydrolytically stable surface for DNA binding. It would have been prima facie obvious to apply Halverson et al's azlactone linking agents to the array of US6,395,483 in order to provide a stable and long shelf life to the surface for binding a wide variety of reactants including oligonucleotides.

5. Claims 1-5,9-20,24-35 & 40-44 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-43 of copending Application No. 10/060794 in view of Minehan et al (Macromolecules vol. 27 pp. 777-783 1994).

Claims 1-5,9-20,24-30 of the instant application are drawn to article of shrinkable polymeric substrate and electrically conductive coating.

Claims 1-43 of 10/060794 are drawn to an array with polymeric substrate and coating and method of making.

Claims 1-43 of 10/060794 are not drawn to electrically conductive coating.

Minehan et al teach polypyrrole PPy coating of films for DNA binding (see whole document esp. abstract).

One of ordinary skill in the art would have been motivated to apply Minehan et al electrical conductive polypyrrole to the claimed array of US 10/060794 in order to provide a unique surface for DNA binding. Minehan et al state that Ppy coating provides an excellent DNA binding for application in hybridizations assays (see page 777). It would have been prima facie obvious to apply Minehan et al's teaching Ppy to the claimed array of US 10/060794 in order to increase the binding of DNA to film surfaces for hybridization assays.

This is a provisional obviousness-type double patenting rejection.

6. Claims 8 & 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-43 of copending Application No. 10/060794 in view of Minehan et al (Macromolecules vol. 27 pp. 777-783 1994) in further view of Halverson et al (WO 99/53319 21 October 1999)

Claims 8 & 23 of the instant application are drawn to article of shrinkable polymeric substrate and electrically conductive coating with the added limitation of azlactone moieties.

The claims 1-43 of 10/060794 and teachings of Minhean were described previously.

Claims 1-43 of 10/060794 are not drawn to azlactone linkers.

Halverson et al teach azlactone binding linkers (see page 12 line 26).

One of ordinary skill in the art would have been motivated to apply Halverson et al's azloactone linking agent to the claims 1-43 of 10/060794 in order to provide a hydrolytically stable surface for DNA binding. It would have been prima facie obvious to apply Halverson et al's azlactone linking agents to the array of 10/060794 in order to provide a stable and long shelf life to the surface for binding a wide variety of reactants including oligonucleotides.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5,8-20,23-36,38 & 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halverson et all (WO 99/53319 21 October 1999) in view of Minehan et al (Macromolecules vol 27 pp. 777-783 1994).

Halverson et al teach an array with shrinkable film and with coating to the substrate (see whole document esp. page 11 line 29, and page 15 line 20-25). They also teach azlactone linkers (see page 12 line 27).They teach the array for binding Dna and oligonucleotides (see page 14 lines 16-23). They teach a method of making the array (see example 1)

Halverson et al do not teach pyrrole.

Minehan et al teach polypyrrole PPy coating of films for DNA binding (see whole document esp. abstract).

One of ordinary skill in the art would have been motivated to apply Minehan et al electrical conductive polypyrrole to the array of Halverson et al in order to provide a unique surface for DNA binding. Minehan et al state that Ppy coating provides an excellent DNA binding for application in hybridizations assays (see page 777). It would have been prima facie obvious to apply Minehan et al's teaching Ppy to the array of Halverson et al in order to increase the binding of DNA to film surfaces for hybridization assays.

8. Claims 6,7,21, 22, 37 & 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Halverson et all (WO 99/53319 21 October 1999) in view of Minehan et al (Macromolecules vol 27 pp. 777-783 1994) in further view of Feast et al (Polymer vol. 37 (22) 5017 1996).

The teachings and suggestions of Halverson et al and Minehan et al are described previously.

Halverson et al do not teach anline, polyacetylene, and toluene/heptane manufacturing methods of film.

Feast et al teach anline coating, polyacetylenea and toluene/heptane standard manufacturing methods of film (see whole doc.).

One of ordinary skill in the art would have been motivated to apply Feast et al's teachings to the array of Halverson et al in order to provide a unique surface for DNA binding. Feast et al state that analine and polyacetylene provides a low cost and highly conductive fcoating. It would have been prima facie obvious to apply Feast et al's conductive analine coating to the array of Halverson et al in order to provide a stable and reactive surface for binding of DNA.

SUMMARY

9. No claims allowed.

CONCLUSION

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Siew whose telephone number is (703) 305-3886 and whose e-mail address is Jeffrey.Siew@uspto.gov. However, the office cannot guarantee security through the e-mail system nor should official papers be transmitted through this route. The examiner is on flex-time schedule and can best be reached on weekdays from 6:30 a.m. to 3 p.m.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703)-308-1119.

Any inquiry of a general nature, matching or filed papers or relating to the status of this application or proceeding should be directed to the Tracey Johnson for Art Unit 1637 whose telephone number is (703)-305-2982.

Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CM1 Center numbers for Group 1600 are Voice (703) 308-3290 and Before Final FAX (703) 872-9306 or After Final FAX (703) 30872-9307.

JEFFREY SIEW
PRIMARY EXAMINER
March 23, 2003